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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,037	01/08/2001	Terry Skemer	TR-053	4654

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TROPIC NETWORKS INC.
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EXAMINER
SIMITOSKI, MICHAEL J

ART UNIT	PAPER NUMBER
2134	

DATE MAILED: 08/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	09/755,037	SKEMER, TERRY
	Examiner	**Art Unit**
	Michael J Simitoski	2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 January 2001</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-24</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-24</u> is/are rejected.

7)☒ Claim(s) <u>10 and 19-21</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>20 June 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☒ All   b)☐ Some * c)☐ None of:

         1.☒ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-24 are pending.

Specification

2.   The disclosure is objected to because of the following informalities:

On page 9, the acronym "DMS" should be replaced with "DSM".

Appropriate correction is required.

Claim Objections

3.   Claims 10 & 19-21 are objected to because of the following informalities:

a.   Regarding claim 10, "packet-labelling" should be replaced with "packet-labeling".

b.   Regarding claims 19 & 21, the claim number 19 is used for multiple claims (page 20 of the specification). *For the purposes of this Office Action, the first claim 19 (page 20, lines 20-21) will be referred to as claim 19a and the second (page 20, lines 23-24), 19b. Similarly, the first claim 20 (page 21, lines 1-2) will be referred to as claim 21a and the second (page 21, lines 4-5) will be referred to as claim 21b. Further, claim 20 is understood to depend from claim 19a and claim 21a is understood to depend from claim 20.*

c.   Regarding claim 20, "statistical usage collection means" should be replaced with "statistical usage collection".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5.   Claims 13 & 19b are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

     d.   Regarding claim 13, the specification does not disclose the authentication performed on the authentication message.

     e.   Regarding claim 19b, the specification does not clearly define network resource management.

6.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7.   Claims 21b-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

     Regarding claim claim 21b, the claim recites the limitation "the authorization client" in line 1. There is insufficient antecedent basis for this limitation in the claim.

     Regarding claim 22, the claim recites the limitation "the authorization client" in line 1. There is insufficient antecedent basis for this limitation in the claim.

     Regarding claim 23, the claim recites the limitation "the authorization client" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 24, the claim recites the limitation "the authorization client" in line 1.

There is insufficient antecedent basis for this limitation in the claim.

8.   *For the purposes of this Office Action, "the authorization client" is understood to mean*

"the authentication agent".

Claim Rejections - 35 USC § 102

9.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10.   Claims 15, 17 & 24, as best understood, are rejected under 35 U.S.C. 102(e) as being

anticipated by U.S. Patent 6,212,561 to Sitaraman et al. (Sitaraman).

Regarding claim 15, Sitaraman discloses a user network interface/service selection

gateway (Fig. 5, #116) for operatively collecting to a plurality of user networks/LAN (Fig. 5,

#110) to receive data units from the plurality of user networks, an authentication agent/AAA

server (Fig. 5, #114), operatively connected to the user network interface for authenticating,

authorizing and forwarding data units (col. 6, lines 11-35) received from the plurality of user

networks/LAN, an external network interface/service selection gateway (Fig. 5, #116),

operatively connected to the authentication agent/AAA server (Fig. 5, #116), for forwarding data

units authorized by the authentication agent/AAA server (Fig. 5, #114) to an external

network/private domain or internet (Fig. 5, #104 & #106).

Regarding claim 17, Sitaraman discloses the authentication agent/AAA server including a

local authorization table/data band of profiles for authorizing data units (col. 6, lines 36-58).

Regarding claim 24, Sitaraman discloses a RADIUS client in the authentication

agent/AAA (col. 7, lines 28-40).

Claim Rejections - 35 USC § 103

11.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

12.   Claim 1-4, 6 & 11-13, as best understood, are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent 6,584,505 to Howard et al. (Howard) in view of "Remote

Authentication Dial In User Service (RADIUS)" by Rigney et al. (Rigney).

Regarding claim 1, Howard discloses receiving, at an access control node/authentication

server operatively connected to a plurality of user networks/web, a data unit/access request from

a user located on one of the plurality of user networks/web (col. 2, lines 15-32), determining that

the data unit/access request requires authentication (col. 2, lines 33-45) and authenticating the

determined data unit/access request (col. 2, lines 33-45). Howard lacks determining that the

authenticated data unit is eligible for transmission. However, Rigney teaches the RADIUS

protocol, which is used to carry out authentication (abstract) for large numbers of users (§1, ¶1),

where the access request is checked for additional information such as client name and port (§2,

¶1-4). Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to use the RADIUS protocol and hence determine that the authenticated

data unit is eligible for transmission. One of ordinary skill in the art would have been motivated

to perform such a modification to carry out authentication for a large number of users, as taught

by Rigney (§1, ¶1 & §2, ¶1-4).

Regarding claim 2, Howard, as modified above, discloses interrogating the user for

access/login information (col. 2, lines 33-45).

Regarding claims 3 & 6, Howard, as modified above, discloses transmitting the access

information to an authentication server/RADIUS of an external network (Rigney, §2, ¶1-4).

Regarding claims 4 & 11-12, Howard, as modified above, discloses transmitting an

authentication message/Access-Accept from the authentication server/RADIUS to the access

control node/client to permit the user to access the external network (Rigney, §2, ¶1-8).

Regarding claim 13, Howard, as modified above, discloses examining the authentication

message for authenticity (Rigney, §3, Authenticator and Response Authenticator)

13.   Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howard in view of

Rigney, as applied to claim 4 above, in further view of U.S. Patent 5,491,752 to Kaufman et al.

(Kaufman). Howard, as modified above, lacks specifically encrypting the access information

prior to transmitting it, and decrypting it at the authentication server. However, Kaufman

teaches that to avoid password eavesdropping, it is known to encrypt the password/access

information (col. 3, lines 26-40). Therefore, it would have been obvious to one having ordinary

skill in the art at the time the invention was made to encrypt the access information and decrypt it

at the authentication server. One of ordinary skill in the art would have been motivated to

perform such a modification to render eavesdropping useless, as taught by Kaufman (col. 3, lines

26-40).

14.   Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howard in view of Rigney, as applied to claim 3 above, in further view of "PPP Authentication Protocols" by Lloyd et al. (Lloyd). Howard, as modified above, lacks the authentication server employing the PAP or CHAP protocols; however, Lloyd teaches that PAP and CHAP are both well-known methods of verifying the identity of a peer (pages 1-8, §2-3). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the password authentication protocol or the challenge handshake authentication protocol in the authentication server. One of ordinary skill in the art would have been motivated to perform such a modification to verify the identity of a peer, as taught by Lloyd (pages 1-8, §2-3).

15.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howard in view of Rigney, as applied to claim 3 above, in further view of "An Access Control Protocol, Sometimes Called TACACS" by Finseth. Howard, as modified above, lacks using the terminal access controller access control system. However, Finseth teaches that TACACS is a protocol that allows an authentication server to receive a username and password to accept or deny requests for access (page 1, ¶2-3). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the TACACS protocol in the authentication server. One of ordinary skill in the art would have been motivated to perform such a modification to accept or deny requests for access on dial up lines, as taught by Finseth (page 1, ¶2-3).

16.   Claim 10, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Howard in view of Rigney, as applied to claim 1 above, in further view of U.S. Patent 5,546,387 to Larsson et al. (Larsson). Howard, as modified above, lacks packet-labeling the data

unit. However, Larsson teaches that data labeling is required in a packet network so that data

packets can be uniquely assigned a connection and routed between nodes (col. 1, lines 16-27).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the

invention was made to packet-label the data unit. One of ordinary skill in the art would have

been motivated to perform such a modification to uniquely assign the data unit a connection and

route the data unit between nodes in a network, as taught by Larsson (col. 1, lines 16-27).

17.   Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howard in view

of Rigney, as applied to claim 1 above, in further view of U.S. Patent 6,377,955 to Hartmann et

al. (Hartmann). Howard, as modified above, lacks collecting statistical usage information at the

access node. However, Hartmann teaches that when network access servers/access nodes are

part of an ISP, accurate accounting of connection time is required so customers are billed

correctly (col. 1, lines 34-56). Therefore, it would have been obvious to one having ordinary

skill in the art at the time the invention was made to collect statistical usage information at the

access node. One of ordinary skill in the art would have been motivated to perform such a

modification to ensure accurate accounting of connection time so customers are billed correctly,

as taught by Hartmann (col. 1, lines 34-56).

18.   Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sitaraman, as

applied to claim 15 above, in further view of U.S. Patent 5,903,564 to Ganmukhi et al.

(Ganmukhi). Sitaraman lacks the user network interface including a plurality of ingress cards

and the external network interface including an egress card. However, Ganmukhi teaches that

ATM switches (devices for receiving and sending packets) typically include ingress cards and

egress cards to support multiple connections in transmitting data (col. 1, lines 13-29). Therefore,

it would have been obvious to one having ordinary skill in the art at the time the invention was

made to include a plurality of ingress cards and an egress card. One of ordinary skill in the art

would have been motivated to perform such a modification to support the transmission of

packets from multiple connections, as taught by Ganmukhi (col. 1, lines 13-29).

19.   Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sitaraman, as

applied to claim 15 above, in further view of U.S. Patent 6,311,275 to Jin et al. (Jin). Sitaraman

lacks the authentication agent including network address assignment and release means.

However, Jin teaches that in order for a network to communicate with the user, and IP address

must be assigned, which can be done by the AAA server (col. 2, lines 34-44). Therefore, it

would have been obvious to one having ordinary skill in the art at the time the invention was

made to include, in the authentication agent/AAA server, means to assign and release IP

addresses. One of ordinary skill in the art would have been motivated to perform such a

modification to allow the network to communicate with the user, as taught by Jin (col. 2, lines

34-44).

20.   Claims 19a & 19b, as best understood, are rejected under 35 U.S.C. 103(a) as being

unpatentable over Sitaraman, as applied to claim 15 above, in further view of U.S. Patent

6,466,977 to Sitaraman et al. (Sitaraman '977).

        Regarding claim 19a, Sitaraman lacks service level enforcing means. However, the '977

reference teaches that it is desirable to load balance among instances of AAA services and to

route a user to a sub-service provider based on service level agreements (SLA) (col. 3, lines 14-

41). Therefore, it would have been obvious to one having ordinary skill in the art at the time the

invention was made to further include service level enforcing means. Therefore, it would have

been obvious to one having ordinary skill in the art at the time the invention was made to load

balance among instances of AAA services and to route users to sub-service providers based on

SLAs, as taught by Sitaraman '977 (col. 3, lines 14-41).

Regarding claim 19b, Sitaraman lacks network resource management means. However,

the '977 reference teaches that it is desirable to decide the AAA service/resource to use based on

parameters such as quality of service, available bandwidth, etc. (col. 3, lines 14-41). Therefore,

it would have been obvious to one having ordinary skill in the art at the time the invention was

made to include network resource management means. One of ordinary skill in the art would

have been motivated to perform such a modification because it is desirable to do so, as taught by

Sitaraman '977 (col. 3, lines 14-41).

21.   Claim 20, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable

over Sitaraman in view of Sitaraman '977, as applied to claim 19a above, in further view of

Hartmann. Sitaraman, as modified above, lacks collecting statistical usage information at the

access node. However, Hartmann teaches that when network access servers/access nodes are

part of an ISP, accurate accounting of connection time is required so customers are billed

correctly (col. 1, lines 34-56). Therefore, it would have been obvious to one having ordinary

skill in the art at the time the invention was made to include means for statistical usage

collection. One of ordinary skill in the art would have been motivated to perform such a

modification to ensure accurate accounting of connection time so customers are billed correctly,

as taught by Hartmann (col. 1, lines 34-56).

22.   Claim 21a, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable

over Sitaraman in view of Sitaraman '977 and Hartmann, in further view of U.S. Patent

6,510,454 to Walukiewicz. Sitaraman, as modified above, lacks alarm-monitoring means.

However, Walukiewicz teaches that network alarm monitoring is needed to quickly correct the

problem via a technician or an automated algorithm (col. 1, lines 19-33). Therefore, it would

have been obvious to one having ordinary skill in the art at the time the invention was made to

include alarm-monitoring means. One of ordinary skill in the art would have been motivated to

perform such a modification to correct problems via a technician or an automated algorithm, as

taught by Walukiewicz (col. 1, lines 19-33).

23.   Claims 21b-22, as best understood, are rejected under 35 U.S.C. 103(a) as being

unpatentable over Sitaraman, as applied to claim 15 above, in further view of "PPP

Authentication Protocols" by Lloyd et al. (Lloyd). Sitaraman lacks the authentication agent

including a PAP client or CHAP client; however, Lloyd teaches that PAP and CHAP are both

well-known methods of verifying the identity of a peer (pages 1-8, §2-3). Therefore, it would

have been obvious to one having ordinary skill in the art at the time the invention was made to

include a password authentication protocol or the challenge handshake authentication protocol

client in the authentication agent. One of ordinary skill in the art would have been motivated to

perform such a modification to verify the identity of a peer, as taught by Lloyd (pages 1-8, §2-3).

24.   Claim 23, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable

over Sitaraman, as applied to claim 15 above, in further view of "An Access Control Protocol,

Sometimes Called TACACS" by Finseth. Howard, as modified above, lacks the authentication

agent including a terminal access controller access control system client. However, Finseth

teaches that TACACS is a protocol that allows an authentication server to receive a username

and password to accept or deny requests for access (page 1, ¶2-3). Therefore, it would have been

obvious to one having ordinary skill in the art at the time the invention was made to include a

TACACS client in the authentication agent. One of ordinary skill in the art would have been

motivated to perform such a modification to accept or deny requests for access on dial up lines,

as taught by Finseth (page 1, ¶2-3).

Conclusion

25.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Michael J. Simitoski whose telephone number is (703)305-8191.

The examiner can normally be reached on Monday - Thursday, 6:45 a.m. - 4:15 p.m.. The

examiner can also be reached on alternate Fridays from 6:45 a.m. – 3:15 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Gregory Morse can be reached on (703)308-4789.

> **Any response to this action should be mailed to:**
> Commissioner of Patents and Trademarks
> Washington, DC 20231
> **Or faxed to:**
> (703)746-7239 (for formal communications intended for entry)
> **Or:**
> (703)746-7240 (for informal or draft communications, please label "PROPOSED"
> or "DRAFT")
> Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
> Arlington, VA 22202, Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should
be directed to the receptionist whose telephone number is (703) 305-9000.

Information regarding the status of an application may be obtained from the Patent
Application Information Retrieval (PAIR) system. Status information for published applications
may be obtained from either Private PAIR or Public PAIR. Status information for unpublished
applications is available through Private PAIR only. For more information about the PAIR
system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR
system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJS
July 22, 2004

Andrew Caldwell